HD Communications Corp.
Ronkonkoma, NY USA

Home of RFAmplifiers.com

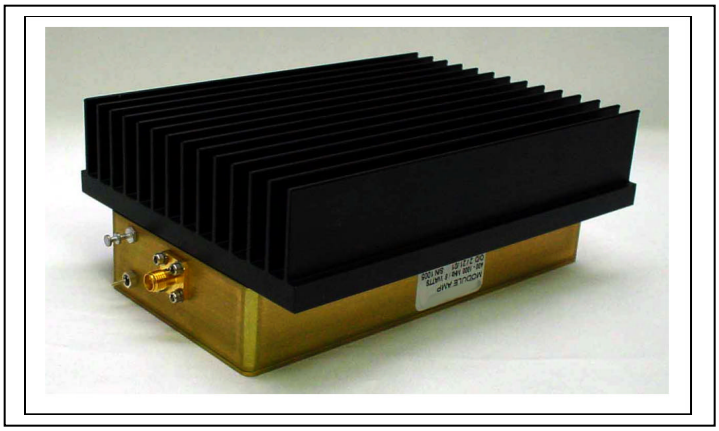
E-mail: sales@rfamplifiers.com Web: http://www.rfamplifiers.com

Solid State Broadband High Power Amplifier

HD19012

0.15 – 1000 MHz / 2 Watt

The HD19012 was designed for ultra broadband high power linear applications, this amplifier utilizes Silicon RF Power MOSFET devices that provide high gain, wide dynamic range and good linearity. Exceptional performance, long term reliability and high efficiency are achieved by employing advanced broadband RF matching networks and combining techniques, EMI/RFI filters, machined housings and qualified components.



- Solid-state Class A linear design
- Instantaneous ultra-broadband
- Built-in Variable Voltage Attenuator (VVA)
- Small and lightweight
- Suitable for all modulation types
- 50 Ohm Input/Output impedance
- High reliability and ruggedness

ELECTRICAL SPECIFICATIONS @ T=25°C, VDD=+28VDC; 50Ω System

Parameter	Symbol	Min	Typ	Max	Unit
Operating Frequency	BW	0.15		1000	MHz
Power Output CW	P_{sat}	2	3		Watts
Power Output @ 1dB G.C.P	P_{1dB}	1			Watts
Power Gain @ P1dB G.C.P	G_{1dB}	30			dB
Gain Adjustment Range (VGC: 0 – 5VDC)	GC	25	30		dB
Small Signal Gain Flatness	ΔG		±1.0	±1.5	dB
Input/Output VSWR	S11/S22			2:1	-
Harmonics @ 1dB G.C.P.	H		-25		dBc
Third Order Intercept Point 2 – Tones, Pout = 0.25W Avg., 500KHz spacing	IP3		+39		dBm
Noise Figure @ minimum attenuation	NF		7	10	dB
Spurious Signals	Spur		-70	-60	dBc
Operating Voltage	VDD	24	28	32	VDC
Supply Current	IDD		1.0	2.0	Amp

ENVIRONMENTAL CHARACTERISTICS

Parameter	Symbol	Min	Typ	Max	Unit
Operating Case Temperature	Tc	0		+50	°C
Storage Temperature	Tstg	-40		+85	°C
Relative humidity w/o condensation	RH	95			%
Altitude	ALT	10,000			Feet
Shock	SH	GR-63-CORE 5.3.1			
Vibration	VI	GR-63-CORE 4.4.4			

MECHANICAL SPECIFICATIONS

Parameter	Value	Units	Limits
Dimensions (excluding heatsink)	6.0 x 3.0 x 1.0	Inch	Max
Weight without HS / with HS	1.0 / 2.5	lb.	Max
RF Connectors In/Out	SMA female		
DC Connectors	Feed Thru		
Cooling	External Heatsink		

PROTECTIONS

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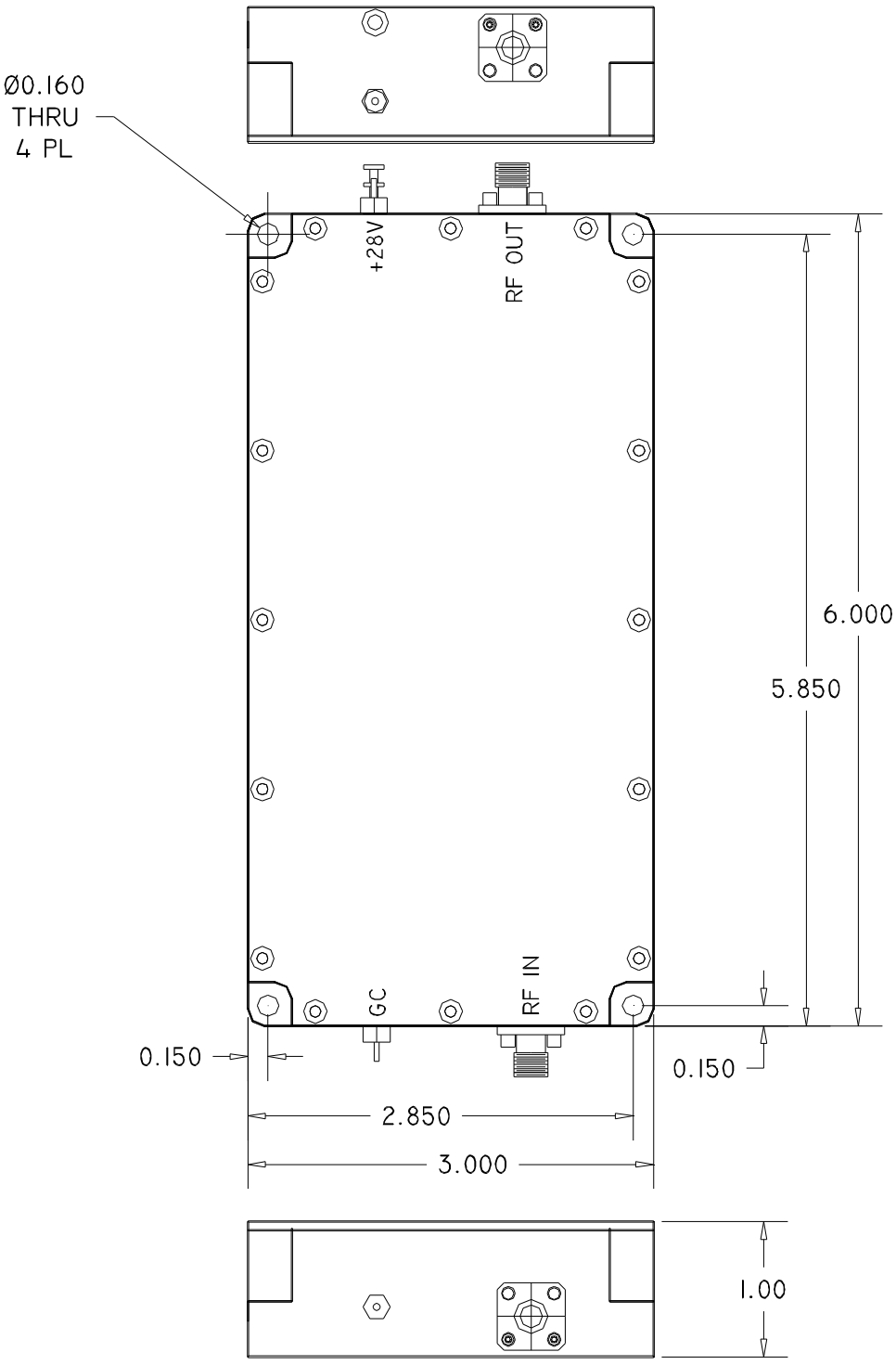
Input Overdrive	P_{OD}	+10 dBm	Max
Load VSWR programmable response	Ψ	Infinite @ all load phase and amplitude	Nom
Thermal Overload	T_{OD}	85°C shutdown	Max

OUTLINE DRAWING



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